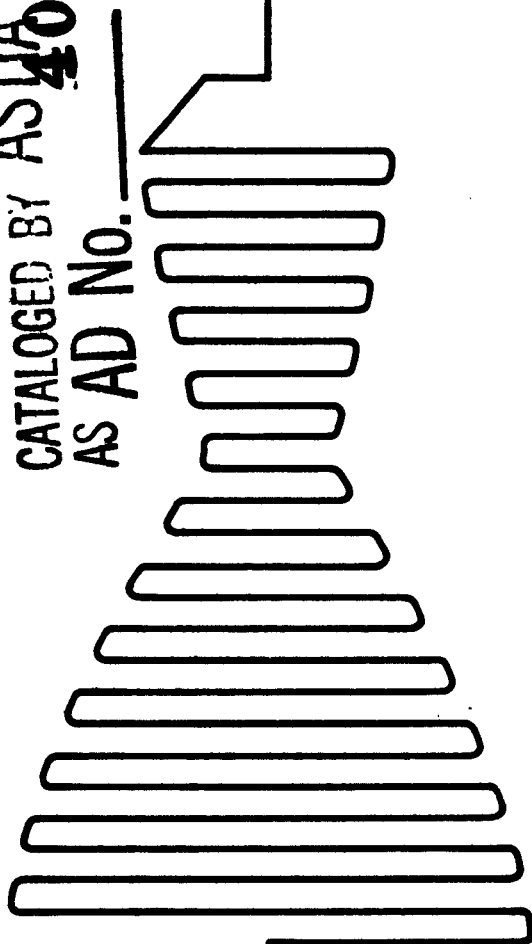


63-3-2

401 239

CATALOGED BY ASTIA
AS AD NO. 401 239



ASTIA
RECEIVED
APR 17 1968
JISIA A



ROCKETDYNE

A DIVISION OF NORTH AMERICAN AVIATION, INC.

CANOGA PARK, CALIFORNIA

RDR 3181-15D

A T L A S
ENGINE SYSTEM COUNTDOWN
RELIABILITY REPORT

ROCKETDYNE

A DIVISION OF NORTH AMERICAN AVIATION, INC.

6633 CANOGA AVENUE
CANOGA PARK, CALIFORNIA

L/C AFOL(694)-328
Part 1, Item 4, of Exhibit B,
and Para. 3.4 of AFBM Exhibit 58-1

PREPARED BY

Reliability Engineering Group

APPROVED BY

J. J. Griffin
J. J. Griffin

Atlas Program Manager

NO. OF PAGES 20

REVISIONS

DATE April 10, 1963

DATE	REV. BY	PAGES AFFECTED	REMARKS

ATLAS ENGINE SYSTEM COUNTDOWN RELIABILITY REPORT

This report contains data applicable to the Atlas Engine System Countdown Reliability in accordance with contractual requirement.

Two listings, booster and sustainer engines, arranged in chronological order, detail all countdown tests performed during the stated period.

The tests have evaluations of Exclusion, Success or Failure and include descriptive statements of test results where pertinent.

An explanation of the headings, codes and abbreviations are included for clarification of terminology.

HEADINGS:

```

=====
LIST TEST NUMBER
NO.  TEST STAND  DATE  ENG S/N  RESULT  TEST TYPE  REMARKS
=====
(1)   (2)         (4)   (5)      (6)     (7)        (8)
      (3)

```

(1) Numerical List Number

(2) Test Number

(3) Test Stand Identification

(4) Date on which test occurred

(5) Engine Serial Number

(6) Result-Classifies each test as either a Success, a Failure, or an Exclusion

(7) Test Type-R&D, Acceptance, etc.

(8) Remarks - A brief description of the countdown result

ABBREVIATIONS

A	ACCEPT	- Acceptance Test	N	NON-SPEC	- Non-Specification
	ACTUAT	- Actuator		NPSH	- Net Positive Suction Head
	AMB	- Ambient		NO.	- Number
	ASSY	- Assembly	O	OBS	- Observer
	AUTO	- Automatic		OE	- Operator Error
B	B/S	- Bootstrap		OSE	- Other Sub-Engine
C	CALIB	- Calibration		OSPEED	- Overspeed
	CK	- Check	P	PERF	- Performance
	C/O	- Cutoff		PRESS	- Pressure
	CONTAM	- Contamination		PROC	- Procedure
	CSM	- Combustion Stability Monitor		PROD	- Production
D	DECL	- Declared		P.U.	- Propellant Utilization
	DEV	- Developed		PRE	- Pretest
	DUR	- Duration	Q	QUAL	- Qualification Test
E	E	- Exclusion	R	RCCD	- Rough Combustion Cut-off Device
	ENG	- Engine		R-D	- Research & Development Test
	EXH	- Exhaust		REF	- Reference
	EXP	- Experimental		REG	- Regulator
F	F	- Failure		REL	- Relay
	FAC	- Facility		REQD	- Required
	FACT	- Factor		RDP	- Reliability Demonstration Program
G	GG	- Gas Generator	S	S	- Success
H	HDWE	- Hardware		SE	- Support Equipment
	H.S.	- Head Suppression		SEQ	- Sequence
	HYD	- Hydraulic		SW	- Switch
	HYP	- Hypergol		SYS	- System
I	IGN	- Igniter (or Ignition)		S/N	- Serial Number
	INAP	- Inapplicable	T	TC	- Thrust Chamber
	INJ	- Injector		TEMP	- Temperature
	INST	- Installation		TRICH	- Trichloroethylene
	INSTR	- Instrumentation		TURB	- Turbine
	INT	- Intended	U	UNK	- Unknown
	ISP	- Specific Impulse	V	VE	- Vernier Engine
J	JKT	- Jacket		VV	- Valve
K	K	- 1000 (lbs. Thrust)	W	WT	- Weighting (Factor)
L	LIQ	- Liquid			
M	MAIF	- Malfunction			
	MFV	- Main Fuel Valve			
	MLV	- Main LOX Valve			
	M/R	- Mixture Ratio			
	M/S	- Main Stage			

MA-3 ATLAS ENGINE SYSTEM
COUNTDOWN RELIABILITY PROGRAM

This report presents the MA-3 Atlas Engine System Countdown Reliability Program results received during the period from

The report is in answer to a contract requirement and in its preparation the following ground rules and definitions were applied:

Countdown Exposure Definition

Countdowns, in general, are considered to commence with the admission of one or both propellants to the engine system. This approximates the operational concept employed during launch and static testing of the missile system.

Countdown Termination Definition

There are two conditions of countdown termination; (1) The signal for engine start is given. (2) The countdown is aborted before start signal.

Countdown Evaluations

Success, "S", indicates a countdown sequence that has been accomplished with no delay or cancellation caused by an engine component malfunction and denotes that the countdown was a success.

Exclusion, "E", indicates a countdown sequence which is not applicable for reliability evaluation due to either a pretest decision, or a post test evaluation.

Any test or component which, as a part of the demonstration program, is declared inapplicable for reliability evaluation of the operation sequence is also considered inapplicable for the countdown sequence. Examples of these declared pretest Exclusions are; checkout tests on an engine following initial test stand installation, malfunction tests, tests to investigate system problems, tests involving excessive no faith hardware, etc. In the case of the specific component the countdown would be Excluded if it was interrupted because of a component failure that was declared of no faith due to it being experimental, obsolete, over-aged or damaged.

A post test countdown evaluation would result in an Exclusion if a condition similar to the following existed; facility equipment and/or instrumentation malfunctions, test operation personnel errors, or an engine malfunction during countdown which would not cause a missile countdown delay, abort or failure.

Failure "F", indicates a countdown sequence wherein an engine system malfunction occurred which would have resulted in a delay abort or mission failure had it occurred during a missile system countdown.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-15D
Page 4

LIST NO.	TEST NUMBER TEST STAGE	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1799	512065E ALFA 1	03-01-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1800	512065F ALFA 1	03-01-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1801	512066E ALFA 1	03-02-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1802	512066F ALFA 1	03-02-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1803	512067E ALFA 1	03-02-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1804	512067F ALFA 1	03-02-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1805	512068E ALFA 1	03-02-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1806	512068F ALFA 1	03-02-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1807	17050E NEOSH0 IIA	03-04-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF F BUILDUP WITH DRY JACKET PHASE OF INERT LEAD PROGRAM.
1808	17051E NEOSH0 IIA	03-04-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF F BUILDUP WITH INERT LEAD.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-150
Page 5

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1809	17C52E NEOSPO IIA	03-C4-63	113114	E	RVT	DECL INAP-PROBLEM STUDY WITH INERT LEAD. VERIFY F BUILD-UP
1810	512069E ALFA 1	03-C4-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1811	512069F ALFA 1	03-C4-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1812	512070E ALFA 1	03-C5-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1813	512070F ALFA 1	03-C5-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1814	512071E ALFA 1	03-C6-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1815	512072E ALFA 1	03-C7-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1816	512072F ALFA 1	03-C7-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1817	512073E ALFA 1	03-C7-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1818	512073F ALFA 1	03-C7-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY ON ENGINE HDWE. FLAME BUCKET PULSE

• S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BURSTIER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RIR 3181-15D
Page 6

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1819	512074E ALFA 1	03-07-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1820	512074E ALFA 1	03-07-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE
1821	512075E ALFA 1	03-08-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE
1822	512075F ALFA 1	03-08-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE
1823	512076E ALFA 1	03-09-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1824	512076F ALFA 1	03-09-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1825	512077E ALFA 1	03-09-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1826	512077F ALFA 1	03-09-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1827	512078E ALFA 1	03-09-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
1828	512078 ALFA 1	03-09-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 REGSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-15D
Page 7

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1829	512079E ALFA 1	03-09-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1830	512079F ALFA 1	03-09-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1831	512080E ALFA 1	03-11-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1832	512080F ALFA 1	03-11-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1833	17C53E NEOSH0 IIA	03-12-63	113120	E	ACCEPTANCE	DECL INAP - CHECKOUT 1ST TEST.
1834	17C54E NEOSH0 IIA	03-12-63	113120	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN
1835	17C55E NEOSH0 IIA	03-13-63	113120	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN
1836	512081E ALFA 1	03-13-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1837	512081F ALFA 1	03-13-63	1218-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1838	17C56E NEOSH0 IIA	03-14-63	113121	E	ACCEPTANCE	DECL INAP - CHECKOUT 1ST TEST.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-35D
Page 8

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1839	17C57E NEOSH0 IIA	03-14-63	113121	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN
1840	17C58E NEOSH0 IIA	03-15-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM RAN D PROGRAM. INERT LEAD STUDY.
1841	17C59E NEOSH0 IIA	03-15-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1842	17C6CE NEOSH0 IIA	03-15-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1843	512082E ALFA 1	03-15-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1844	512C82F ALFA 1	03-15-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1845	512083E ALFA 1	03-15-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1846	512C83F ALFA 1	03-15-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1847	512084E ALFA 1	03-15-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1848	512C84F ALFA 1	03-15-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-150
Page 9

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1849	512085E ALFA 1	03-16-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1850	512085F ALFA 1	03-16-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1851	512086E ALFA 1	03-16-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1852	512086F ALFA 1	03-16-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1853	512087E ALFA 1	03-16-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1854	512087F ALFA 1	03-16-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1855	17C61E NEOSH0 11A	03-18-63	113114	E	RVT	DECL INAP-PR3BLE4 STUDY MODIFIED SYSTEM R AND D PROGRAM. INVERT LEAD STUDY.
1856	512088E ALFA 1	03-18-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1857	512088F ALFA 1	03-18-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1858	17C62E NEOSH0 11A	03-19-63	113114	E	RVT	DECL INAP-PR3BLE4 STUDY MODIFIED SYSTEM RAND D PROGRAM. INVERT LEAD STUDY.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RIR 3181-15D
Page 10

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1859	17063E NEOSH IIA	03-19-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1860	512065E ALFA 1	03-19-63	1121-2	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1861	512069F ALFA 1	03-19-63	1218-3	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1862	512050E ALFA 1	03-19-63	1121-2	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1863	512050F ALFA 1	03-19-63	1218-3	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1864	512051E ALFA 1	03-19-63	1121-2	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1865	512051F ALFA 1	03-19-63	1218-3	E	R-C	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1866	17064E NEOSH IIA	03-20-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1867	17065E NEOSH IIA	03-21-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1868	17066E NEOSH IIA	03-21-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MAB BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-150
Page 11

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1869	512092E ALFA 1	03-21-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1870	512092F ALFA 1	03-21-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1871	17C67E NEOSH0 IIA	03-22-63	113114	E	RVT	DECL INAP-PR3BLE4 STUDY AND D PROGRAM. INERT LEAD STUDY.
1872	17068E NEOSH0 IIA	03-22-63	113114	E	RVT	DECL INAP-PR3BLE4 STUDY AND D PROGRAM. INERT LEAD STUDY.
1873	17C69E NEOSH0 IIA	03-22-63	113114	E	RVT	DECL INAP-PR3BLE4 STUDY AND D PROGRAM. INERT LEAD STUDY.
1874	512093E ALFA 1	03-22-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1875	512093F ALFA 1	03-22-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1876	512094E ALFA 1	03-23-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1877	512094F ALFA 1	03-23-63	1218-3	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
1878	512095E ALFA 1	03-23-63	1121-2	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-150
Page 12

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1879	512055F ALFA 1	03-23-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1880	17070E NEOSH0 IIA	03-25-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1881	17071E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1882	17072E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1883	17073E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1884	17074E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1885	17075E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1886	17076E NEOSH0 IIA	03-26-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1887	5121C2E ALFA 1	03-26-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE INVESTIGATION
1888	17077E NEOSH0 IIA	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-15D
Page 13

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1889	17078E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY MODIFIED SYSTEM R AND D PROGRAM. INERT LEAD STUDY.
1890	17079E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1891	17080E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1892	17081E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1893	17082E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1894	17083E NEOSH0 11A	03-27-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1895	512096E ALFA 1	03-27-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1896	512096F ALFA 1	03-27-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1897	512097E ALFA 1	03-27-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1898	512097F ALFA 1	03-27-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

NAB BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-15D
Page 14

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1899	512098E ALFA 1	03-27-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1900	512098F ALFA 1	03-27-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.
1901	17084E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1902	17085E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1903	17086E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1904	17087E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1905	17088E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1906	17089E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1907	17090E NEOSH0 11A	03-28-63	113114	E	RVT	DECL INAP-PROBLEM STUDY VERIFICATION OF THRUST BUILDUP USING INERT LEAD.
1908	512099E ALFA 1	03-28-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY FLAME BUCKET PULSE STUDY ON ENGINE HARDWARE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3861-150
Page 15

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1909	512059F ALFA 1	03-28-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
1910	512100E ALFA 1	03-28-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
1911	512100F ALFA 1	03-28-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
1912	512101E ALFA 1	03-28-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
1913	512101F ALFA 1	03-28-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
1914	512102F ALFA 1	03-29-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY INVESTIGATION. FLAME BUCKET PULSE
1915	512103E ALFA 1	03-29-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1916	512103F ALFA 1	03-29-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1917	512104E ALFA 1	03-30-63	1121-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1918	512104F ALFA 1	03-30-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

PA3 BOOSTER COUNTDOWN LIST

PERIOD ENDING 03-31-63 RDR 3181-15D
Page 16

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
1919	5121C5E ALFA 1	03-30-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1920	5121C5F ALFA 1	03-30-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1921	5121C6E ALFA 1	03-30-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1922	5121C6F ALFA 1	03-30-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1923	5121C7E ALFA 1	03-30-63	1121-2	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
1924	5121C7F ALFA 1	03-30-63	1218-3	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE

MA3 SUSTAINER COUNTDOWN TEST LIST

PERIOD ENDING 03-31-63 RDR 3181-150
Page 17

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
922	512065D ALFA 1	03-01-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE.
923	512066D ALFA 1	03-02-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
924	512067D ALFA 1	03-02-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
925	512069D ALFA 1	03-04-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
926	512070D ALFA 1	03-05-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
927	514035D ALFA 28	03-05-63	222894	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN
928	512071D ALFA 1	03-06-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
929	512072D ALFA 1	03-07-63	2223	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE.
930	514036D ALFA 28	03-12-63	222555	E	ACCEPTANCE	DECL INAP - CHECKOUT TC AND HYDRAULIC PACKAGE REPLACEMENT.
931	514037D ALFA 28	03-12-63	222555	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 SUSTAINER COUNTDOWN TEST LIST

PERIOD ENDING 03-31-63 RIR 3161-150
Page 18

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
932	5120820 ALFA 1	03-15-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
933	5120830 ALFA 1	03-15-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
934	5120840 ALFA 1	03-15-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
935	5120850 ALFA 1	03-16-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
936	5120860 ALFA 1	03-16-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
937	5120870 ALFA 1	03-16-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
938	5120880 ALFA 1	03-18-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
939	5120910 ALFA 1	03-19-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
940	5140380 ALFA 28	03-20-63	222897	E	ACCEPTANCE	DECL INAP - CHECKOUT BUILDUP. FIRST TEST AFTER
941	5120920 ALFA 1	03-21-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MAB SUSSTAINER COUNTDOWN TEST LIST

PERIOD ENDING 03-31-63 RDR 3161-150
Page 19

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
942	512093D ALFA 1	03-22-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
943	514039D ALFA 2H	03-22-63	222897	S	ACCEPTANCE	SUCCESSFUL COUNTDOWN
944	512094D ALFA 1	03-23-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
945	512095D ALFA 1	03-23-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
946	512096D ALFA 1	03-27-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
947	512097D ALFA 1	03-27-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
948	512098D ALFA 1	03-27-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
949	512099D ALFA 1	03-28-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
950	512100D ALFA 1	03-28-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.
951	512101D ALFA 1	03-28-63	2222-1	E	R-D	DECL INAP-PR3BLE4 STUDY STUDY ON ENGINE HARDWARE.

* S=SUCCESS, F=FAILURE, AND E=EXCLUSION.

MA3 SUSTAINER COUNTDOWN TEST LIST

PERIOD ENDING 03-31-63 RIR 3181-150
Page 20

LIST NO.	TEST NUMBER TEST STAND	DATE	ENG S/N	RESULT	TEST TYPE	REMARKS
952	5121C2D ALFA 1	03-29-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY INVESTIGATION FLAME BUCKET PULSE
953	5121C3D ALFA 1	03-29-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
954	5121C4D ALFA 1	03-30-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HARDWARE. FLAME BUCKET PULSE
955	5121C5D ALFA 1	03-30-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE. FLAME BUCKET PULSE
956	5121C6D ALFA 1	03-30-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE FLAME BUCKET PULSE
957	5121C7D ALFA 1	03-30-63	2222-1	E	R-D	DECL INAP-PROBLEM STUDY STUDY ON ENGINE HDWE FLAME BUCKET PULSE